WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetlands / Rocky Flats Site City/County: Jefferson Sampling Date: 9/10/14

Applicant/Owner: DOE State: CO Sampling Point: FC1-1B (426)

Investigator(s): Jody Nelson & Marilyn Kastens Section, Township, Range: T2S, R70W, Sec. 10

Landform (hillslope, terrace, etc.): borrow pit bottom Local relief (concave, convex, none): Concave Slope (%): 1-2

Subregion (LRR): G Lat: 750583.829729 Long: 2081714.958119 Datum: NAD27

Soil Map Unit Name: NA - mitigation area NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Mitigation area. New normal circumstances. Former borrow pit area.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: Wetland)			
67 1. TARA1	<1		FACW
331 2. SAEX1	<1		FACW
332 3. SAAM1 (added 11/19/14)	<1		FACW
333 4. PODE1 (forget to record these on this data sheet)	<1		FAC
5.	~~0.25~~ 11/19/14		
	1.00 ~~0.25~~ = Total Cover		
Herb Stratum (Plot size: Wetland)			
68 1. JUBA1	3		FACW
69 2. JUTO1	35	Y	FACW
70 3. AGST1	8		FACW
71 4. PAVI1	12	Y	FAC
72 5. PHPR1	6		FACU
73 6. GRSQ1	<1		FACU
74 7. AGSC1	1		FAC
75 8. ASLA1	<1		FACU
76 9. POMO1	<1		FACW
77 10. AGCA1	6		FACU
	71.75 = Total Cover		
Woody Vine Stratum (Plot size: _____)	14 from back 2nd page		
1. Total = 85.75			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 30%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

<1 = 0.25%

50% = 42.875% 20% = 17.15%

SOIL

Sampling Point: FC1-B (426)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
A	0-3	10YR 5/6	65	10YR 7/1	15	D	Ped Faces	VGR-C	
				7.5YR 5/8	20	C	"		
AC	3-7	7.5YR 6/4	55	7.5YR 5/8	30	C	Ped Faces	VGR-C	
				10YR 7/1	15	D	"		
C	7-12+	10YR 7/1	75	10YR 5/8	24	C	Ped Faces	C	
				7.5YR 4/4	1	C	"		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Soil may have been found in a light gray C material.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0-1

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

See wetland water level data from earlier in summer

Remarks: Rained last night. Surface flows, but no water in soil pit.

Wetland Determination Data Form - Great Plains Region
Extra Page for Vegetation Species

Date 9/10/14
Sampling Point FCI -1B (426)

Tree Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
5				
6				
7				
8				
9				
10				

_____ = Total Cover

Sapling/Shrub Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
6				
7				
8				
9				
10				

_____ = Total Cover

Herb Stratum

		Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
78	11	ASPOI	1		FACU
79	12	HOJUI	6		FACW
80	13	SCACI	<1		OBL
81	14	AGSMI	<1		FACU
82	15	ASFAI	<1		FACU
83	16	MEALI	<1		FACU
84	17	ASSPI	<1		FAC
85	18	ANGEI	<1		FACU
86	19	ELMAI	4		OBL
87	20	SONUI	<1		FACU
88	21	ANSCI	<1		FACU
89	22	POPRI	<1		FACU
90	23	ECCRI	<1		FAC
91	24	AMARI	<1		FACU
92	25	XASTI	<1		FAC
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				

14 = Total Cover

Over > ?	no

Wetland Determination Data Form - Great Plains Region
Extra Page for Vegetation Species

Date _____

Sampling Point _____

Tree Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
11				
12				
13				
14				
15				

_____ = Total Cover

Sapling/Shrub Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
11				
12				
13				
14				
15				

_____ = Total Cover

Herb Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				

_____ = Total Cover

Wetland Qualitative Revegetation Evaluation Form Form #_____

Date 9/10/14
Observer(s) Jody Nebs
Location ID FC1 -1B (426)

Photographs taken today? Y (N)

Are desired wetland plant species present? (Y) N

Are there any issues regarding the establishment of the desired wetland species? Explain, if so.

no

Are the hydrologic conditions appropriate for successful establishment and sustainability of the wetland. If not, describe the problem/issue.

yes

Woody Plant Counts

Species	Stem Count	Height			Width			
		1	2	3	1	2	3	
TARAI	2	2'	1'		1'	1'		
SAAMI	7	1.5'	2'	1.5	2'	2'	2'	IIII
PODEI	2	3'	2'		2'	1.5'		
SAEXI	Too numerous	1.5'	2'	2'	1'	2'	2'	HH

Noxious weed evaluation. See separate noxious weed evaluations conducted throughout the summer months (June – August).

Suggestions for management:

Control weeds (TARAI) as needed,

Other comments:

Area filling in nicely. Will continue to improve over time.

Completed by: Jody K Nels- JK Nels Date 9/10/14